What is Claimed is:

1. A real-time monitoring apparatus for biochemical reaction, which comprises:
a temperature control block comprising a thermoelectric element(2) capable of supplying heat into reaction tubes and a heat transmission block(3) which transmit the heat to the reaction tubes;
a light irradiation source comprising a lamp(5) which irradiates light with uniform intensity to sample contained in the reaction tube, and the optical waveguide(8); and
an optical system comprising receiving part for receiving fluorescence irradiated from the sample by the light emitted from the light irradiation source.

2. The real-time monitoring apparatus according to claim 1, wherein the lamp(5) includes a first ellipsoidal reflecting mirror.

3. The real-time monitoring apparatus according to claim 1, wherein the refractive index of medium of the optical waveguide is 1.35 ~ 2.0.

4. The real-time monitoring apparatus according to claim 1, wherein the optical waveguide has a rectangular

shape.

5. The real-time monitoring apparatus according to claim 1, wherein the optical waveguide has a round shape.

6. A real-time monitoring apparatus for biochemical reaction, which comprises:
a temperature control block comprising a thermoelectric element(2) capable of supplying heat into a reaction tube and a heat transmission block(3) which transmit the heat to the reaction tubes containing sample;
a light irradiation source comprising a lamp(41) which irradiates the light with uniform intensity to sample contained in the reaction tube, a condensing lens 3(36) and an optical waveguide(8); and
3) an optical system comprising a receiving part for receiving fluorescence irradiated from the sample by the light emitted from the light irradiation source.

7. The real-time monitoring apparatus according to claim 6, wherein the lamp(41) includes a parabolic mirror.

8. The real-time monitoring apparatus according to claim 6, wherein the refractive index of medium of the

optical waveguide(8) is 1.35 ~ 2.0.

9. The real-time monitoring apparatus according to claim 6, wherein the optical waveguide(8) has rectangular shape.

10. The real-time monitoring apparatus according to claim 6, wherein the optical waveguide has round shape.

11. A real-time monitoring apparatus for biochemical reaction, which comprises:
a temperature control block comprising a thermoelectric element(2) capable of supplying heat into reaction tube, and a heat transmission block(3) which transmit the heat to the reaction tubes containing sample;
a light irradiation source comprising a lamp(5) which irradiates light with uniform intensity to sample contained in the reaction tube and the optical waveguide(8); and
an optical system comprising a light receiving part for receiving fluorescence generated by the light irradiated from the light source and a second reflecting mirror(11) which alters light path.

12. The real-time monitoring apparatus according to

claim 11, which comprises two or more the second reflecting in mirror(11) which alters light path

13. The real-time monitoring apparatus according to claim 11, wherein the lamp(5) comprises an ellipsoidal mirror.

14. The real-time monitoring apparatus according to claim 11, wherein the refractive index of medium of the optical waveguide(8) is 1.35 ~ 2.0.

15. The real-time monitoring apparatus according to claim 11, wherein the optical waveguide(8) has rectangular shape.

16. The real-time monitoring apparatus according to claim 6, wherein the optical waveguide has round shape.